UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P.O. Bicu 1450.

Alexandria, Virgina 22313-1450 www.aspas.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

27123 7590 01/06/2009 MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101 EXAMINER
BRADLEY, CHRISTINA
ART UNIT PAPER NUMBER

DATE MAILED: 01/06/2009

 APPLICATION NO.
 FILING DATE
 FIRST NAMED INVENTOR
 ATTORNEY DOCKET NO.
 CONFIRMATION NO.

 10/566.535
 04/27/2006
 Kivotaka Shiba
 4439-4039
 2547

TITLE OF INVENTION: PEPTIDES CAPABLE OF BINDING TO TITANIUM SILVER SILICONE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(8) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	04/06/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 1SI. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This appropriate. All further indicated unless correcte maintenance fee notificat	form should be used to correspondence including a below or directed oth tions.	or transmitting ng the Patent, ad nerwise in Block	the ISSI Ivance o : 1, by (JE FEE and PUBLIC rders and notification a) specifying a new of	of m	ON FEE (if requinaintenance fees w pondence address;	red). B ill be i and/or	locks 1 through 5 st nailed to the current (b) indicating a sepa	ould be completed correspondence add ate "FEE ADDRE	where iress as SS" for
	ENCE ADDRESS (Note: Use Bi	ock 1 for any change o	of address)		Note Fee(: pape	: A certificate of r s) Transmittal. This rs. Each additional	nailing certifi paper,	can only be used fo cate cannot be used for such as an assignment ling or transmission.	domestic mailings or any other accomp of or formal drawin	of the sanying g, must
	7590 01/06 FINNEGAN, L.L. ANCIAL CENTER Y 10281-2101				I ber	Cert	ificate	of Mailing or Transa) Transmittal is being ficient postage for firs (SSUE FEE address 1) 273-2885, on the definition of the design of the des	nission denosited with the	United
									(Depositor	's name)
									(Si	ignature)
					L					(Date)
APPLICATION NO.	FILING DATE			FIRST NAMED INVEN	TOR		ATTO	RNEY DOCKET NO.	CONFIRMATION	NO.
10/566,535	04/27/2006			Kiyotaka Shiba		4439-4039		4439-4039	3547	
TITLE OF INVENTION	: PEPTIDES CAPABLE	OF BINDING	TO TITA							
APPLN. TYPE	SMALL ENTITY	ISSUE FEE I	DUE	PUBLICATION FEE D	UE	PREV. PAID ISSUE	FEE	TOTAL FEE(S) DUE	DATE DUE	
nonprovisional	NO	\$1510		\$300		\$0		\$1810	04/06/2009	,
EXAM	INER	ART UNI	Т	CLASS-SUBCLASS	\neg					
BRADLEY, O		1654		530-329000						
"Fee Address" indi PTO/SB/47; Rev 03-0 Number is required. 3. ASSIGNEE NAME A	ondence address (or Cha 3/122) attached. ication (or "Fee Address 2 or more recent) attach ND RESIDENCE DATA ess an assignee is ident h in 37 CFR 3.11. Comp	nge of Corresponding of Corresponding Indication form ed. Use of a Custa TO BE PRINT	ndence stomer ED ON		ingle or a attor I be p r typ ne pa an a	ely, firm (having as a gent) and the name neys or agents. If r printed. e) stent. If an assigne ussignment.	membe s of up so nam	er a 2er a 2er a 2er a 2er a 3er a 2er	cument has been fi	iled for
Please check the appropri	iate assignee category or	categories (will	not be p	rinted on the patent):	۵	Individual 🚨 Co	rporati	on or other private gro	up entity Gove	rnment
4a. The following fee(s) a Issue Fee Publication Fee (N Advance Order - #	o small entity discount p	permitted)	4	b. Payment of Fee(s): (A check is enclos Payment by credi The Director is he overpayment, to I	ed. t card reby	i. Form PTO-2038	is atta	ched. equired fee(s), any de		ıy form).
	s SMALL ENTITY state	is. See 37 CFR I						TTY status. See 37 CF		
NOTE: The Issue Fee and interest as shown by the r	d Publication Fee (if req records of the United Sta	uired) will not be tes Patent and Ti	accepte rademark	d from anyone other the Office.	an th	ne applicant; a regis	tered a	ttorney or agent; or th	e assignee or other p	arty in
Authorized Signature						Date				
Typed or printed name						Registration N	D			
This collection of informan application. Confident submitting the completed this form and/or suggestit Box 1450, Alexandria, V Alexandria, Virginia 223	ation is required by 37 C tiality is governed by 35 I application form to the ons for reducing this but irginia 22313-1450. DC 13-1450.	FR 1.311. The in U.S.C. 122 and USPTO. Time rden, should be so O NOT SEND FE	nformati 37 CFR will vary sent to th EES OR	on is required to obtain 1.14. This collection is depending upon the is e Chief Information O COMPLETED FORM	or re s esti ndivi ffice S TC	etain a benefit by the imated to take 12 n idual case. Any coi r, U.S. Patent and THIS ADDRESS.	ne publ ninutes nment: Fradem . SENI	ic which is to file (and to complete, includin s on the amount of tir ark Office, U.S. Deps O TO: Commissioner i	by the USPTO to p g gathering, prepari he you require to co rtment of Commerc or Patents, P.O. Bo	rocess) ng, and omplete e, P.O. x 1450,

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/566,535	04/27/2006	Kiyotaka Shiba	4439-4039 3547		
27123	7590 01/06/2009		EXAMINER		
MORGAN & F	INNEGAN, L.L.P.	BRADLEY, CHRISTINA			
	NCIAL CENTER	ART UNIT	PAPER NUMBER		
NEW YORK, N	10281-2101	1654			

DATE MAILED: 01/06/2009

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 252 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 252 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Application No. Applicant(s) 10/566,535 SHIBA ET AL. Notice of Allowability Examiner Art Unit Christina Marchetti Bradlev 1654 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. This communication is responsive to the amendment filed 11/25/2008. The allowed claim(s) is/are 3,6,7,10-12,14,16-19, 22-26, 32, 35, 36, 38-45, 50, 53, 54, 56-63. 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). b) ☐ Some* c) ☐ None of the: a) 🔯 All 1. T Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. X Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). * Certified copies not received: _____. Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL. Attachment(s) 1. Notice of References Cited (PTO-892) 5. Notice of Informal Patent Application 2. Notice of Draftperson's Patent Drawing Review (PTO-948) Interview Summary (PTO-413), Paper No./Mail Date Information Disclosure Statements (PTO/SB/08). 7. X Examiner's Amendment/Comment Paper No./Mail Date 4. ☐ Examiner's Comment Regarding Requirement for Deposit 8. X Examiner's Statement of Reasons for Allowance of Biological Material 9. ☐ Other . /Christina Marchetti Bradley/ /Cecilia Tsang/

Examiner, Art Unit 1654

Supervisory Patent Examiner, Art Unit 1654

Application/Control Number: 10/566,535 Page 2

Art Unit: 1654

EXAMINER'S AMENDMENT

- An examiner's amendment to the record appears below. Should the changes and/or
 additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR
 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the
 payment of the issue fee.
- 2. In a telephone conversation with Serge Ilin-Schneider on 11/14/2008, Applicant was informed that the amendment to the claims filed 08/15/2008 are sufficient to overcome the pending rejections under 35 U.S.C. 112/101, 112, first and second paragraphs, 102 and 103. Applicant was also informed that upon further consideration, claims 23, 24, 42, 43, 60 and 61 are rejected for failing to comply with the written description provision of 35 U.S.C. 112, first paragraph, with respect to the limitation "nonpeptide group". The examiner proposed the following amendment to the claims to overcome this rejection. Applicant was also informed that upon further consideration, claims 19-22, 31, 40, 41, 58 and 59 are rejected for failing to comply with the written description provision of 35 U.S.C. 112, first paragraph, with respect to the limitation "functional peptide or functional protein." The examiner proposed canceling these claims. Applicant was also informed that prior art exists on peptides comprising SEQ ID NOs: 1 and 2 but that peptides consisting of SEQ ID NOs: 1 and 2 are free of the art. The examiner proposed amending claims 3, 6, 32, 35, 50 and 53 to closed language. In response, Applicant filed an amendment to the claims on 11/25/2008.
- Authorization for this examiner's amendment was given in a telephone interview with Serge Ilin-Schneider on 11/25/2008. Applicant accepts the amendment below without

Art Unit: 1654

acquiescing the rejections raised in the telephone interview on 11/14/2008 and solely to advance prosecution.

The application has been amended as follows:

Cancel claims 20, 21 and 31.

In claims 19, 40 and 58, delete the phrase "functional peptide or a".

 The following is an examiner's statement of reasons for allowance: the amendment to the claims filed 08/15/2008 are sufficient to overcome the pending rejections under 35 U.S.C.
 112/101, 112, first and second paragraphs, 102 and 103.

- 5. The closest prior art is U.S. Patent No. 7,214,786 which discloses a protein comprising SEQ ID NO: 1 (SEQ ID NO: 127523). U.S. Patent No. 7,214,786 does not teach or suggest that the protein comprising instant SEQ ID NO: 1 has titanium, silver or silicon binding activity nor does it teach or suggest the isolation of the hexapeptide sequence of instant SEQ ID NO: 1 from the full-length of SEQ ID NO: 127523. Therefore, a peptide consisting of instant SEQ ID NO: 1 is novel and unobvious over the prior art of U.S. Patent No. 7,214,786.
- 6. Likewise, a closely related prior art document is U.S. Patent No. 6,833,447 which discloses a protein comprising instant SEQ ID NO: 2 (SEQ ID NO: 15509). U.S. Patent No. 6,833,447 does not teach or suggest that the protein comprising instant SEQ ID NO: 2 has titanium, silver or silicon binding activity nor does it teach or suggest the isolation of the hexapeptide sequence of instant SEQ ID NO: 2 from the full-length of SEQ ID NO: 15509.

Therefore, a peptide consisting of instant SEO ID NO: 2 is novel and unobvious over the prior art of U.S. Patent No. 6,833,447.

Page 4

- A sequence database search of SEQ ID NOs: 3-38 yielded no hits with 100% homology. 7.
- 8 Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance"
- 9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Marchetti Bradley whose telephone number is (571)272-9044. The examiner can normally be reached on Monday-Thursday, 9:00 A.M. to 3:00 P.M.
- If attempts to reach the examiner by telephone are unsuccessful, the examiner's 10 supervisor, Cecilia Tsang can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
- 11 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

Application/Control Number: 10/566,535 Page 5

Art Unit: 1654

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cecilia Tsang/ /Ch Supervisory Patent Examiner, Art Unit 1654 Exa

/Christina Marchetti Bradley/ Examiner, Art Unit 1654